

Energy Conservation and Climate Change

This section evaluates greenhouse gas (GHG) emissions and energy consumption associated with the proposed project and analyzes the project's consistency with applicable plans and policies. This section is based on technical data presented in the *Greenhouse Gas Assessment* prepared by LDN Consulting, Inc. (2020b; see [Appendix F](#)). Analysis in this section also draws upon data in the *City of Encinitas General Plan* (1991) and the *City of Encinitas 2013-2021 Housing Element Update Environmental Assessment* (2018a). Third-party technical reports were peer-reviewed by Michael Baker International and the City of Encinitas.

ENVIRONMENTAL SETTING

Climate Change

Climate change is a distinct change in average meteorological conditions with respect to temperature, precipitation, and storms. Climate change can result from both natural processes and human activities. Natural changes in the climate result from very small variations in the earth's orbit which change the amount of solar energy the planet receives. Human activities can affect the climate by emitting heat-absorbing gases into the atmosphere and by making changes to the planet's surface, such as deforestation and agriculture. The following impacts to California from climate change have been identified:

- Higher temperatures, particularly in the summer and in inland areas;
- More frequent and more severe extreme heat events;
- Reduced precipitation, and a greater proportion of precipitation falling as rain rather than snow;
- Increased frequency of drought conditions;
- Rising sea levels;
- Ocean water becoming more acidic, harming shellfish and other ocean species; and
- Changes in wind patterns.

These direct effects of climate change may in turn have a number of other impacts, including increases in the number and intensity of wildfires, coastal erosion, reduced water supplies, threats to agriculture, and the spread of insect-borne diseases.

Greenhouse Gas

GHGs are naturally present in the earth's atmosphere and play a critical role in maintaining the planet's temperature. The natural process through which heat is retained in the troposphere is called the greenhouse effect. The greenhouse effect traps heat in the troposphere through a threefold process as follows: shortwave radiation emitted by the sun is absorbed by the earth; the earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and re-emit it in all directions, with some radiation heading out into space and some heading back toward the earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the earth is the underlying process of the greenhouse effect. Without the presence of GHGs, the earth's average temperature would be approximately zero degrees Fahrenheit.

Parts of the earth's atmosphere act as an insulating blanket, trapping sufficient solar energy to keep the global average temperature within a range suitable for human habitation. The blanket is a collection of atmospheric gases called greenhouse gases because they trap heat similar to the effect of glass walls in a greenhouse. These gases, mainly water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone, and chlorofluorocarbons, all act as effective global insulators, reflecting infrared radiation back to the earth. Human activities, such as producing electricity and driving internal combustion vehicles, emit these gases into the atmosphere.

GHG are unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood by scientists who study atmospheric chemistry that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration.

Energy**Electricity**

Electricity usage in California for different land uses varies substantially by the types of uses in a building, types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building.

Electricity in the state is predominantly provided by renewable resources, such as solar, wind, geothermal, and hydroelectric. In 2018, renewable resources supplied approximately 50 percent of the in-state electricity generation while natural gas-fired power plants provided approximately

40 percent and nuclear provided less than 10 percent. Given the size and population of the state, California is still one of the largest importers of energy in the nation, as approximately 30 percent of the state's electricity supply came from generating facilities outside the state in 2018. As such, almost all the coal-fueled electricity generation consumed in the state was imported (approximately 4 percent of state's power supply) (EIA 2020).

San Diego Gas & Electric (SDG&E) provides electric services to 3.6 million customers through 1.4 million electric meters located in a 4,100-square-mile service area that includes San Diego County (County) and southern Orange County. SDG&E is a subsidiary of Sempra Energy (SDG&E 2020) and would provide electricity to the proposed project. SDG&E receives electric power from a variety of sources. According to the California Public Utilities Commission (CPUC) 2019 California *Renewables Portfolio Standard (RPS) Annual Report*, 44 percent of SDG&E's power came from eligible renewable energy sources (CPUC 2019). Refer to [Table 3.5-1](#) to see SDG&E's distribution of renewable resources. In the County, the average annual residential electricity use per home decreased by about 2 percent (5,599 kilowatt hours [kWh] to 5,493 kWh) from 2017 to 2018 (USD 2020).

Table 3.5-1 Portfolio Percentages for SDG&E 2018 RPS

Biopower	Geothermal	Solar PV	Wind	Hydro	Solar Thermal
5%	0%	48%	49%	0%	0%

Source: CPUC 2019

Notes: Values exceed 100% due to rounding.

Renewable Energy

In 2018, California ranked first in the nation electricity generated from solar, geothermal, and biomass energy, fourth in hydroelectric power, and fifth in wind energy. By the end of 2018, California had about 12,000 megawatts of utility-scale solar power capacity and 20,000 megawatts of installed solar capacity. Geothermal resources in the state, approximately 2,730 megawatts of capacity, account for almost 75 percent of the nation's utility-scale electricity generation from geothermal energy. The state has over 30 power plants fueled by biomass (wood and wood waste), which leads the nation in energy generation. At the end of 2019, the state had more than 5,800 megawatts of installed wind capacity (EIA 2020).

Natural Gas

CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Pacific Gas & Electric (PG&E), Southern California Gas (SoCalGas), SDG&E, Southwest Gas, and several smaller natural gas utilities. SDG&E provides natural gas service to the Counties of San Diego and Orange and would provide natural gas to the proposed project.

SDG&E is a wholesale customer of SoCalGas and currently receives all of its natural gas from the SoCalGas system (CPUC 2017).

The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 32 percent of the natural gas delivered by California utilities in 2012. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 68 percent of the natural gas delivered by California utilities in 2012 (CPUC 2017).

Petroleum

As of 2018, the state ranked fifth largest in U.S. crude oil reserves and seventh largest producer of crude oil in the nation. However, the state's overall crude oil production has steadily declined during the past 30 years. Due to its large size and population, California is the second-largest consumer of petroleum products and the largest consumer of motor gasoline and jet fuel in the nation. Almost 90 percent of the petroleum consumed in the state is used in the transportation sector (EIA 2020).

However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. As such, the state has implemented various policies and incentives to increase the use of non-carbon-emitting vehicles and decrease vehicle miles traveled (VMT). In 2018, the state had 500,000 registered electric and plug-in hybrid vehicles and nearly one-fourth of the nation's electric vehicle charging stations (EIA 2020).

At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, and reduce transportation-source air pollutants, GHG emissions, and VMT. Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

REGULATORY FRAMEWORK

Federal

Greenhouse Gas Emissions

To date, no national GHG reduction targets or climate plans have been adopted that would apply to the proposed project or the City of Encinitas.

Energy Conservation

Federal Energy Policy and Conservation Act

In response to the 1973 oil crisis, Congress enacted the Energy Policy and Conservation Act (EPCA) of 1975, which established the first fuel economy standards for on-road motor vehicles in the United States. The purpose of EPCA is to increase energy production and supply, reduce energy demand, provide energy efficiency, and give the executive branch additional powers to respond to disruptions in energy supply. Most notably, EPCA established the Strategic Petroleum Reserve, the Energy Conservation Program for Consumer Products, and Corporate Average Fuel Economy regulations.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of surface transportation programs. The purpose of the ISTEA is to maximize mobility and address national and local interests in air quality and energy. The ISTEA contained factors that metropolitan planning organizations (MPO) were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

In 1998, Congress enacted the Transportation Equity Act for the 21st Century, which expanded programs and initiatives established in the ISTEA legislation. The act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under the ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions.

Energy Independence and Security Act

In 2007, Congress enacted the Energy Independence and Security Act of 2007 (EISA) with the purpose to increase energy independence and efficiency. The legislation requires the Renewable Fuel Standard (RFS) to continually increase over time to reduce the reliance of petroleum. The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

State**Greenhouse Gas Emissions**

Discussed below are some of the key state directives and policies pertaining to GHG emissions reduction.

Assembly Bill 32

The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32; California Health and Safety Code Division 25.5, Sections 38500–38599) established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and established a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This requirement was achieved early in 2016.

Senate Bill 97

Senate Bill (SB) 97 (2007) (Chapter 185, Statutes of 2007; Public Resources Code Sections 21083.05 and 21097) acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. The Natural Resources Agency adopted amendments to the CEQA Guidelines in 2010 to address the directive. As a result, CEQA lead agencies are required to estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur and to mitigate the impacts where feasible.

Senate Bill 375

SB 375 (2008) (Chapter 728, Statutes of 2008) aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires each MPO to adopt a sustainable communities strategy or alternative planning strategy that will prescribe land use allocation in that MPO's regional transportation plan. The California Air Resources Board (CARB) is charged with reviewing each MPO's sustainable communities strategy or alternative planning strategy for consistency with its assigned targets. San Diego County is part of the San Diego Association of Governments' (SANDAG) MPO and is covered under SANDAG's *2050 Regional Transportation Plan*.

Energy Conservation

Discussed below are some of the key state directives and policies pertaining to energy conservation.

Warren-Alquist Act

The California legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the California Energy Commission (CEC). The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first state of California *Energy Action Plan* in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost effective and environmentally sound for California's consumers and taxpayers. In 2005, a second *Energy Action Plan* was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior two years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based in part on a finding that the state's energy policies have been significantly influenced by the passage of AB 32, the California Global Warming Solutions Act of 2006 (discussed above). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078

SB 1078 (2002) established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20 percent standard by 2018. These retail sellers include electrical corporations, community choice aggregators, and

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electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107, X1-2, 350, and 100

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20 percent shall come from renewables; by December 31, 2016, 25 percent shall come from renewables; and by December 31, 2020, 33 percent shall come from renewables. According to the 2019 RPS Annual Report to the Legislature, all of the large investor-owned utilities have reached this goal in 2018 (CPUC 2019).

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030, with interim goals of 40 percent by 2024 and 45 percent by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from nonrenewable resources is expected to be reduced based on implementation of the 60 percent RPS in 2030. Therefore, any project's reliance on nonrenewable energy sources would also be reduced.

Assembly Bill 1007

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with CARB and in consultation with other state, federal, and local agencies. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

Commonly referred to as the CALGreen Code, Title 24, Part 11 standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Title 24 also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduce energy used in the state. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5 percent less energy than those built to the 2013 standards.

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective January 1, 2020. The standards require that all low-rise residential buildings shall have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output is equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards, while new nonresidential buildings will use about 30 percent less energy.

The CALGreen standards originally took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Sixty-five percent of construction and demolition waste must be diverted from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.

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- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.
- Low pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

California's Energy Efficiency Standards for Appliances (Title 20)

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards.

New appliances regulated under Title 20 include refrigerators, refrigerator-freezers and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems.

Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design.

Local

Climate Action Plan

The City's Climate Action Plan (CAP) serves as a guiding document and outlines a course of action for community and municipal operations to reduce GHG emissions and the potential impacts of climate change within the jurisdiction. The CAP benchmarks GHG emissions in 2012 and identifies

what reductions are required to meet GHG reduction targets based on state goals embodied in AB 32. The CAP aims to achieve the following local community-wide GHG reduction targets:

- 13 percent below 2012 levels by 2020
- 41 percent below 2012 levels by 2030

To achieve these objectives, the 2018 CAP identifies the following:

- A summary of baseline GHG emissions and the potential growth of these emissions over time.
- The expected climate change effects on the City.
- GHG emissions reduction targets and goals to reduce the community's contribution to global warming.
- Identification of strategies, specific actions, and supporting measures to comply with statewide GHG reduction targets and goals, along with strategies to help the community adapt to climate change impacts.

As part of the 2018 CAP implementation, each strategy, action, and supporting measure will be continually assessed and monitored. Reporting on the status of implementation of these strategies, periodic updates to the GHG emissions inventory, and other monitoring activities will help ensure that the 2018 CAP is making progress.

City of Encinitas General Plan

The *City of Encinitas General Plan* (1991) is the primary source of long-range planning and policy direction used to guide growth and preserve the quality of life in Encinitas. The *General Plan* states that a goal of the City is to analyze proposed land uses to ensure that the designations would contribute to a proper balance of land uses within the community. The relevant goals and policies of the General Plan include:

Circulation Element

Policy 1.15: The City will actively support an integrated transportation program that encourages and provides for mass-transit, bicycle transportation, pedestrians, equestrians, and car-pooling.

GOAL 3: The City of Encinitas will promote the use of other modes of transport to reduce the dependence on the personal automobile.

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- Policy 3.2. Continue to assist in expanding public transportation and emphasize public transportation in future development with preference given to cost-effective alternatives.
- Policy 3.3: Create a safe and convenient circulation system for pedestrians.
- Policy 3.11: The City will strive to implement a safe, direct, and convenient circulation system for commuting and recreational bicycle traffic. The City will support the development of additional bicycle facilities in the Coastal Zone, including the following:
- All Circulation Element roads will include provisions for bicycle lanes unless precluded by design and safety considerations in which cases, alternative routes shall be provided to form a continuous network.
 - The provision of secure bicycle storage facilities at all beaches designated for high and moderate levels of use; and
 - The installation of bicycle and surfboard racks on all buses serving the Coastal Zone.

Resource Management Element

- Policy 1.1: Require new development to utilize measures designed to conserve water in their construction.
- Policy 1.10: Promote the use of water efficient sprinkling and gardening systems to include ordinances and technology to encourage drought tolerant plants.
- GOAL 5: The City will make every effort to participate in programs to improve air and water quality in the San Diego region.**
- Policy 5.1: The City will monitor and cooperate with the ongoing efforts of the U. S. Environmental Protection Agency, the San Diego Air Pollution Control District, and the State of California Air Resources Board in improving air quality in the regional air basin. The City will implement appropriate strategies from the San Diego County SIP which are consistent with the goals and policies of this plan.
- GOAL 6: The City will make every effort to reduce the amount of solid and liquid waste generated in the Planning Area and will identify ways to responsibly deal with these wastes.**

- Policy 6.1: The City will phase in all practical forms of mandatory recycling as soon as possible.
- Policy 6.2: The City will contract only with waste haulers who will willingly cooperate with the City's recycling effort.
- GOAL 9: The City will encourage the abundant use of natural and drought tolerant landscaping in new development and preserve natural vegetation, as much as possible, in undeveloped areas.**
- Policy 9.4: Encourage and adopt standards for the use of drought tolerant and/ or natural landscaping and efficient irrigation systems throughout the City.
- GOAL 13: Create a desirable, healthful, and comfortable environment for living while preserving Encinitas, unique natural resources by encouraging land use policies that will preserve the environment.**
- Policy 13.1: The City shall plan for types and patterns of development which minimize water pollution, air pollution, fire hazard, soil erosion, silting, slide damage, flooding and severe hillside cutting and scarring.
- GOAL 15: The City will make every effort to conserve energy in the City thus reducing our dependence on fossil fuels.**
- Policy 15.1: The City will encourage the use of alternate energy systems, including passive solar and architectural and mechanical systems, in both commercial and residential development.
- Policy 15.2: The patterns of proposed subdivisions and the orientation and design of structures on lots shall be designed with the objective of maximizing the opportunities for solar energy use and energy conservation.
- Policy 15.3: Energy conserving construction standards and requirements shall be enforced in the field inspection of new construction.

City of Encinitas Housing Element 2019

In March 2019, the City Council adopted the Housing Element Update (HEU) which provides the City with a coordinated and comprehensive strategy for promoting the production of safe, decent, and affordable housing for all within the City. The purpose of the HEU is to ensure that the City establishes policies, procedures, and incentives to increase the quality and quantity of the housing supply in the City.

The Housing Plan Update 2019 includes the 2013-2021 HEU and a series of discretionary actions to update and implement the City's Housing Element. The City received Local Coastal Program Amendment approval for the HEU from the California Coastal Commission in September 2019, and certification from the state Department of Housing and Community Development in October 2019.

GOAL 2: Sound housing will be provided in the City of Encinitas for all persons.

Policy 2.8: Continue to develop and promote an energy efficiency conservation measure consistent with the strategies outlined in the City's Climate Action Plan.

Additionally, according to the *City of Encinitas 2013-2021 Housing Element Update Environmental Assessment*, implementation of projects identified in the HEU would not directly conflict with the policies and reduction measures in the City's CAP. However, development of the proposed project has the potential to exceed the City's interim screening threshold (900 metric tons of carbon dioxide equivalent [MTCO₂e] per year) which would potentially conflict with the City's ability to achieve the CAP's GHG emissions reduction targets.

Projects that do not achieve the screening level threshold shall prepare a project-specific GHG analysis that identifies an appropriate project-level significance threshold and project-specific mitigation measures. Examples of mitigation measures which can be utilized were identified in the GHG-3 Table A of the Environmental Assessment and are shown in Table 3.5-2 below. As described in Section 2.0, Project Description, the proposed project has incorporated many of these features into the project.

Table 3.5-2 Menu of Potential Project Level GHG Reduction Measures

GHG-3 TABLE A: Menu of Potential Project-Level GHG Reduction Measures	
Feature	Description
Indoor Space Efficiencies	
Heating/Cooling Distribution System	Improve duct insulation 15% over standard requirement (2013 Title 24)
Space Heating/Cooling Equipment	High Efficiency HVAC (equivalent to SEER 15 AFUE or 8.5 service population)
Water Heaters	High Efficiency Water Heaters or, Solar Water Heater Systems or, Water Heater with Solar Pre-heat System
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. Future development under the HEU, should strive for daylighting in all rooms within the living space through use of windows, solar tubes, skylights, etc.

Table 3.5-2, continued

GHG-3 TABLE A: Menu of Potential Project-Level GHG Reduction Measures	
Feature	Description
Artificial Lighting	High Efficiency Lights (50% of in-unit fixtures are high efficacy) High efficacy is defined as 40 lumens/watt for 15 watts or less fixtures: 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)
Appliances	All multi-family developments will provide Energy Star ceiling fans, refrigerators, dishwashers, and laundry washing machines. Laundry washing machines include those provided for shared or common use.
Miscellaneous Residential Building Efficiencies	
CalGreen Tier II	Demonstrate compliance with CALGreen Tier II standards.
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes natural heating, cooling, and lighting.
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on June 21.
Energy Star Homes	EPA Energy Star for Homes (version 3 or above).
Independent Energy Efficiency Calculations	Provide point values based upon energy efficiency modeling of the Project. Note that engineering data will be required documenting the energy efficiency and point values based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.
Residential Renewable Energy Generation	
Photovoltaic	Solar Photovoltaic panels installed on individual homes or in collective neighborhood arrangements such that the total power provided augments 25 percent of the power needs of the project.
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing homes that will help implement renewable energy within the City. These off- site renewable energy retrofit project proposals will be determined on a case by case basis and must be accompanied by a detailed plan that documents the quantity of renewable energy the proposal will generate. Point values will be determined based upon the energy generated by the proposal.
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.
Residential Water Conservation	
<i>Irrigation and Landscaping</i>	
Water Efficient Landscaping	Limit conventional turf to < 50% of required landscape area Limit conventional turf to < 25% of required landscape area No conventional turf (warm season turf to < 50% of required landscape area and/or low water using plants are allowed). Only California Native Plants that requires no irrigation or some supplemental irrigation.

Table 3.5-2, continued

GHG-3 TABLE A: Menu of Potential Project-Level GHG Reduction Measures	
Feature	Description
Water Efficient irrigation systems	Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use).
Recycled Water	Recycled connections (purple pipe) to irrigation system on site Water Reuse Graywater Reuse System collects Gray water from clothes washers, showers and faucets for irrigation use, Storm water Reuse Systems On-site storm water collection, filtration and reuse systems that provide supplemental irrigation water.
Potable Water	
Overall water reduction calculation	Achieve 25 percent reduction
Vehicle Trip Reduction Measures	
Mixed-Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions.
Residential Near Local Retail (Residential only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled.
Bicycle Infrastructure	
Bicycle Infrastructure	Provide onsite bicycle-path linkages between residential and other land uses or a surrounding bicycle path network.
Renewable Fuel/Alternative Fuel Vehicles (Electric Vehicle Infrastructure)	
Electric Vehicle Recharging	Provide circuit and capacity in garages of residential units for use by an electric vehicle. Charging stations are for on-road electric vehicles legally able to drive on all roadways including Interstate Highways and freeways.
Electric Vehicle Charging Stations	Include 1 electric vehicle charging station for every 50 parking spaces.
Construction and Demolition Debris Diversion Program	
Recycling of Construction/ Demolition Debris	All construction debris will be disposed of at a Construction, Debris, and Inert-material Recovery Facility

Source: Ldn Consulting, 2020b ([Appendix F](#))

IMPACT ANALYSIS AND MITIGATION MEASURES

Thresholds of Significance

The following thresholds of significance are based, in part, on CEQA Guidelines Appendix G. For the purposes of this EIR, the proposed project may have a significant adverse impact related to GHG emissions if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The proposed project would have a significant impact related to energy if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

PROJECT IMPACTS AND MITIGATION

GREENHOUSE GAS EMISSIONS

Impact 3.5-1	The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.
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The HEU Environmental Assessment determined that the HEU had the potential to result in impacts due to exceedances of the City's interim 900 MT CO₂e/yr threshold, and required developments that would exceed the applicable 900 metric tons of CO₂e interim screening threshold of significance (or those in place at the time of the development application) to prepare a Greenhouse Gas Emissions Assessment. Appendix F provides the project-level analysis including both construction and operational emissions.

As analyzed in [Appendix F](#), and noted in the [Chapter 2.0, Project Description](#), the proposed project includes numerous sustainability and energy efficiency components, which would be included as conditions of approval, restated here for convenience:

1. The project would install low flow water fixtures in all residential units.
2. All lighting within the project would be designed using LED technology for both indoor and outdoor areas.
3. The project would provide separate waste containers to allow for simpler material separations, or the project would pay for a waste collection service that recycles the materials in accordance with AB 341 to achieve a 75% waste diversion. 100% of all green waste would be diverted from landfills and recycled as mulch and used on-site.
4. The project would not install hearth options in residential units.

3.5 Energy Conservation and Climate Change

5. The project would be required to utilize Tier 4 construction Equipment with Diesel Particulate Filters (DPF) attached or equivalent.
6. The project would install 434 kilowatts (kW) of solar.
7. The project would provide circuit and capacity in all 250 residential garages for use by electric vehicles, and would install 13 Electric Vehicle (EV) Charging Stations in surface parking areas throughout the project site.
8. The project would install high-efficiency water heaters or solar water heater systems.
9. The project would comply with ENERGYSTAR appliance requirements, and would meet ENERGYSTAR for Homes.
10. The project would install water efficient/drought tolerant and/or native landscape, use smart evapotranspiration controllers, would use reclaimed water on non-agricultural project landscaping areas and would limit conventional turf.
11. The project would install high-efficiency heating, ventilation, and air conditioning (HVAC) systems areas.
12. The project has been designed such that most buildings are oriented in a north/south direction.
13. The project includes a mix of uses, including an on-site restaurant, on-site recreation areas (community recreation center, trail system, linear park) and is within walking distance of off-site retail and commercial centers areas.
14. The project would improve duct insulation 15 percent over 2013 Title 24.
15. The project would comply with CalGreen Tier II standards.
16. The project would install a storm water reuse system on-site to collect, filter and re-use captured stormwater in landscaped areas.
17. The project would provide residential development within walking and biking distance of local retail.

With respect to cumulative San Diego Air Basin-wide conditions, the San Diego Air Pollution Control District (SDAPCD) has developed strategies to reduce short-term construction-related criteria air pollutant emissions and to reduce long-term mobile-source GHG emissions.

Based on expected construction activities and equipment shown in [Table 3.2-5](#) in Section 3.2, Air Quality, construction of the proposed project would generate approximately 1,133.98 MTCO₂e

over the construction life of the proposed project (refer to [Table 3.5-3, Expected Construction CO₂e Emissions MT/Year](#)). Lead agencies, including the SDAPCD and the County of San Diego, recommend that construction emissions be amortized over a 30-year period to account for the contribution of construction emissions over a project's lifetime. As such, amortizing the emissions from construction of the proposed project over a 30-year period would result in an annual contribution of approximately 38 MTCO₂e (1,133.98 MT CO₂e / 30 years = 38 MT CO₂e/yr).

Table 3.5-3 Expected Construction CO₂e Emissions (MT/Year)

Year	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
2021	0.00	462.69	462.69	0.10	0.00	465.17
2022	0.00	629.16	629.16	0.09	0.00	631.34
2023	0.00	37.35	37.35	0.01	0.00	37.47
Total						1,133.98
Yearly Average Construction Emissions (metric tons/year over 30 years)						37.80

Notes: Expected construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in [Table 3.2-5](#) in [Section 3.2, Air Quality](#).

Source: Ldn Consulting, 2020b ([Appendix F](#))

These emissions are added to operational emissions to account for the contribution of construction to GHG emissions for the lifetime of the proposed project. Additionally, the construction manager would be required to comply with SDAPCD Rules 50, Visible Emissions, 51, Nuisance, and 55, Fugitive Dust Control and applicable best management practices such as using low-emission construction vehicles and equipment (SDAPCD n.d). These requirements are also imposed on cumulative projects throughout the San Diego Air Basin.

In the long term, the proposed project would generate additional trips, emit air pollutants, use electric and natural gas, and increase mobile-source GHG emissions. [Table 3.5-4](#) shows the annual operational emissions inventory. These include GHG emissions associated with buildings (natural gas and purchased electricity), water consumption (energy embodied in potable water), solid waste management (including transport and landfill gas generation), and vehicles.

Table 3.5-4 Proposed Project Operational GHG Emissions (MT/Year)

Source	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Area	0.00	3.04	3.04	0.00	0.00	3.11
Electrical Usage	0.00	209.34	209.34	0.01	0.00	210.10
Natural Gas	0.00	151.34	151.34	0.00	0.00	152.24
Mobile	0.00	1,212.28	1,212.28	0.06	0.00	1,213.87
Waste	13.04	0.00	13.04	0.77	0.00	32.30

Table 3.5-4, continued

Source	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Water	7.87	73.72	81.59	0.81	0.02	107.74
Subtotal						1,719.36
Amortized Construction Emissions						37.8
434 kW of PV						-225.8
EV Chargers (263 stations)						-186.64
Project Total GHG Emissions						1,344.72
Residents (628 persons) + Employment (20 persons): Service Population						648
Metric Tons/Service Population						2.08

Notes: Data is presented in decimal format and may have rounding errors.

Source: Ldn Consulting, 2020b ([Appendix F](#))

As shown in [Table 3.5-4](#), project operations are anticipated to generate 1,692 MTCO₂e per year. The City's CAP has a goal to reduce the City's emissions 41 percent below 2012 levels by 2030. The CAP contains 19 City actions to help achieve this goal, such as the installation of low-flow water fixtures and EV charging stations, which both private and municipal projects must implement.

According to the City's CAP, a multi-family development is required to install 1W of solar per square foot (City Action RE-2) and commercial developments are required to install 2W of solar per square foot (City Action RE-3). Therefore, to be consistent with the CAP, the proposed project is required to install at minimum 257 kW of solar. The proposed project anticipates installing 434 kW of solar; therefore, the project would be consistent with the CAP requirements for on-site solar. Installation of the solar equipment would reduce the proposed project's GHG emissions by approximately 226 MT CO₂e/year (see [Table 3.5-4](#)).

As analyzed in [Section 3.14, Utilities and Services Systems](#), the proposed project would implement measures to reduce potable water usage. [Table 3.14-7, Net Potable Water Use Summary](#), calculates that the proposed project's residential water conservation measures reduce total potable water usage by 6,063 gpd. When the project's total residential water conservation is divided by the project's anticipated residents (628 residents), the water savings represents a reduction of approximately 9.6 gallons per customer per day, which is almost twice the CAP Measure WE-1 target of saving 5 gallons per customer per day.

With respect to on-road transportation emission reductions, Goal 4.1 (Reduce VMT) includes a number of supporting goals, which are either included as part of the project design or as part of the proposed project's TDM Program (see [Section 3.12, Transportation](#)). Further, the project site is located near a transit stop on Leucadia Boulevard which is within walking distance of most residents. This transit stop could connect residents to the planned transit services envisioned by

the City including Express Services to education facilities and routes to Coaster connections (CET-2).

City Action CET-4 of the CAP requires multi-family developments to install EV charging stations at 5 percent of the total number of parking spaces while City Action CET-5 requires commercial development to install enough EV charging stations to cover 8 percent of all common parking areas. The project proposes to install EV charging stations in each garage of the 250 residential units, which far exceeds the requirement of City Action CET-4. In addition, the proposed project would include 13 EV charging stations in the commercial parking spaces (8 percent of 85 spots = 10 stations), which meets the requirement of CET-5. Overall, the proposed project would install 263 Level II EV charging stations. Installation of the EV charging stations would reduce the proposed project's GHG emissions by approximately 187 MT/year (see [Table 3.5-4](#)). Additionally, the proposed project would install a solar water heater at the restaurant, which would further reduce GHG emissions. However, to be conservative, this last energy reduction was not quantified in the GHG emissions analysis.

City Action CS-1 calls for the development and implementation an Urban Tree Planting Program, with a goal of 650 net new trees planted. CS-1 states that removed trees must be replaced at a 1:1 ratio. Approximately 32 street trees along Leucadia Boulevard and Quail Gardens Drive would be removed as part of the project. However, the proposed project would replant approximately 30 trees along Leucadia Boulevard and 5 trees along Quail Gardens Drive which would fully mitigate the loss of trees in the right-of-way (refer to [Figure 2.0-9a, Conceptual Landscape Plan](#)). The replanting and maintenance of the trees in the right-of-way would comply with the regulations and policies established in the City's General Plan Resource Management Element and Municipal Code (refer to [Section 3.3, Biological Resources](#)).

With implementation of CAP-exceeding installation of solar PV and EV chargers as proposed, the proposed project's emissions (operations and amortized construction) are reduced to approximately 1,318 MTCO_{2e} per year. This does not account for reasonably foreseeable reductions due to other design features or future regulatory restrictions which are anticipated to be passed by the State of California to achieve additional GHG emissions reductions.

In addition to the CAP analysis above, the *Greenhouse Gas Assessment* contained an alternative GHG analysis based on service population (service population). This is determined by dividing the project emissions by the sum of the number of residents and number workers supported by a project. In the *2017 Climate Change Scoping Plan Update*, CARB suggested substantial progress could be made if a regional or countywide GHG reduction plan, such as the City's CAP, targeted reducing emissions to 6 MTCO_{2e} per capita by 2030 and 2 MTCO_{2e} per capita by 2050. However, instead of purely relying on the regional/countywide projections, local data was gathered to

establish a baseline to ensure that the proposed project would provide its fair share contribution toward meeting GHG reduction targets ([Appendix F](#)).

During preparation of the City's baseline emissions inventory, the University of San Diego's Energy Policy Initiatives Center (EPIC) calculated GHG emissions for both community-wide sectors and County government operations for the year 2012. EPIC then projected emissions for the years 2020 and 2030 based on factors such as population and job growth. EPIC concluded that, in 2012, the total emissions in the City was approximately 483,773 MTCO₂e.

To be consistent with SB 32, the City must reduce emissions by 41 percent from the baseline, which equates to a target of 285,426 MTCO₂e/year in 2030. The City's service population in 2030 is expected to be 92,896 (64,938 residents and 27,958 jobs). Therefore, to achieve a City emissions level of 285,426 MTCO₂e in 2030, the required per capita efficiency target would be approximately 3.1 MTCO₂e (285,426/92,896) per service population ([Appendix F](#)), which is approximately half of CARB's suggested target.

Based on this approach, the proposed project would be required to generate fewer service population emissions than 3.1 MTCO₂e. As shown in [Table 3.5-4](#), the proposed project was found to generate approximately 1,318 MTCO₂e with both amortized construction and annual operations incorporated. The total resident population for the project's 250 residential units was estimated to be 628 based on population metrics from SANDAG (2.51 residents per home in 2020 and 2.52 residents per home in 2035). Employment in the proposed project would be approximately 20 employees at full buildout. The City's current population is approximately 62,819 (see [Table 4.3-1, Population and Housing Projections](#)); therefore, the addition of the proposed project's 628 residents would be within the CAP's 2030 projected service population.

As such, the proposed project would generate about 2.08 MTCO₂e per service population (1,318 MTCO₂e/648 persons). Further, this total is in line with the *2017 Climate Change Scoping Plan Update* emissions of 2 MTCO₂e per capita by 2050 without taking into account future regulatory changes which will reasonably further reduce GHG emissions given California's aggressive agenda in addressing greenhouse gas emissions. Since the proposed project would generate fewer emissions than the City-specific localized efficiency metric of 3.1 MTCO₂e per service population and because the proposed project's long-term (2050) emissions would be within CARB's emissions projections for 2050, the project would result in a less than significant impact ([Appendix F](#)).

The proposed project is consistent with the General Plan and accounted for in the HEU, which will form the basis of future updates to the CAP, and the project's emissions would be captured therein. The CAP is currently being updated. The project is required to comply with the City's CAP by implementing the appropriate CAP measures, which are described above. Furthermore, the proposed project would generate fewer emissions than the City-specific localized efficiency

metric and is within the projections for the future service population established in the CAP. Therefore, the proposed project would not generate substantial GHG emissions and would not directly contribute to short- or long-term GHG impacts. Impacts would be **less than significant**.

Mitigation Measures: None required.

Level of Significance: Less than significant.

CONFLICT WITH APPLICABLE PLANS, POLICIES, OR REGULATIONS

Impact 3.5-2 **The project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.**

California Air Resources Board 2008 and 2017 Scoping Plans

AB 32 establishes a statewide goal to reduce GHG emissions back to 1990 levels by 2020. CARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32 goals with the most recent being the 2008 and 2017 Scoping Plans. While the 2008 and 2017 Scoping Plans are not directly applicable to specific projects, the plans contain several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB has adopted many of the measures identified in the plans, such as those that reduce emissions from area sources and vehicle fleets, which are not applicable to individual development projects.

The proposed project would comply with all applicable regulations adopted in furtherance of the 2008 and 2017 Scoping Plans to the extent required by law. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, such as the installation of low-flow water fixtures and EV charging stations. Refer to the project components listed under Impact 3.5-1. Table 3.5-5 provides the relevant measures from the CARB Scoping Plan and the proposed project's consistency with those measures.

Table 3.5-5 Project Consistency with CARB Scoping Plan

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	N/A	The proposed project would include 263 electric vehicle charging stations in exceedance of the City's requirements.

Table 3.5-5, continued

Scoping Plan Measure	Measure Number	Project Consistency
Regional Transportation-Related GHG Targets	T-3	CARB has adopted its regional transportation-related GHG targets in furtherance of SB 375. Those targets do not apply directly to the proposed project, and instead are considered by MPOs (like SANDAG) when developing their sustainable communities strategies. See below for discussion of the proposed project's consistency with SANDAG's Regional Transportation Plan.
Reduction in Vehicle Miles Traveled	N/A	The proposed project is located on an infill site that is in close proximity to multimodal transportation options. Further, the proposed project would provide needed residential opportunities (including affordable housing units) in the City of Encinitas.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	The proposed project would comply with Title 24, Parts 6 and 11, building energy efficiency standards applicable at the time of building permit application. Further, as described above, the proposed project includes numerous design features that would reduce natural gas consumption, promote building electrification, and achieve other efficiencies relative to the consumption of energy.
Energy Efficiency (Natural Gas)	CR-1	The proposed project would comply with Title 24, Parts 6 and 11, building energy efficiency standards applicable at the time of building permit application. As discussed above, the proposed project includes other design attributes to reduce natural gas consumption, including the elimination of natural gas fireplaces, from the design of the residential units.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project would install a solar water heater on both the recreation center pool and the restaurant.
Renewables Portfolio Standard	E-3	The proposed project would use energy supplied by SDG&E, which complies with the Renewable Portfolio Standard. SDG&E expects an approximate 44 percent renewables mix in calendar year 2024.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	The proposed project would include a 434 kW solar photovoltaic system located on the roof and carports.

Table 3.5-5, continued

Scoping Plan Measure	Measure Number	Project Consistency
Water Sector		
Water Use Efficiency	W-1	The proposed project would utilize water-saving features, including low-flow fixtures and water-efficient landscape irrigation.
Water Recycling	W-2	The proposed project would utilize reclaimed water and would include waste piping to permit the reuse of greywater.
Reuse Urban Runoff	W-4	The proposed project would include low-impact development measures to the extent feasible to reduce the amount of stormwater runoff from the site.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state and local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	The proposed project's buildings would meet green building standards that are in effect at the time of building permit application.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building permit application.
Industry Sector		
Recycling and Waste Management Sector		
Mandatory Commercial Recycling	RW-3	This measure applies to commercial projects. However, during both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all waste would be recycled to the maximum extent possible.
Forests Sector		
High Global Warming Potential Gases Sector		
Limit High Global Warming Potential Use in Consumer Products	H-4	The proposed project's residents would use consumer products that would comply with the regulations that are in effect at the time of manufacture.

Table 3.5-5, continued

Scoping Plan Measure	Measure Number	Project Consistency
Agriculture Sector		
Methane Capture at Large Dairies	A-1	This measure does not apply to the proposed project because it applies to capturing methane at large dairies. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Sources: CARB 2008, 2017b, and Ldn Consulting, 2020b ([Appendix F](#))

Notes: GHG = greenhouse gas; proposed project = Fox Point Farms Project; CARB = California Air Resources Board; EV = electric vehicle.

Based on this analysis and the items listed in [Table 3.5-5](#), the proposed project would be consistent with the applicable strategies and measures in the 2008 and 2017 Scoping Plans. Furthermore, the Scoping Plans encourage infill projects and characterize such projects as crucial to achieving the state's long-term climate goals. The plans encourage accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms. As the proposed project is an infill project, it would be consistent with these goals and policies of the Scoping Plans. In addition, the 2017 Scoping Plan contains a list of local actions that agencies can implement to further reduce GHG emissions. As shown in [Table 3.5-6](#), the proposed project would be consistent with applicable local actions set forth within Appendix B of the 2017 Scoping Plan.

Table 3.5-6 Project Consistency with Scoping Plan Local Actions

Scoping Plan Local Action	Project Consistency
Construction	
Enforce idling time restrictions for construction vehicles	The proposed project will enforce unnecessary idling to 5 minutes, in accordance with CARB's Off-Road Regulation.
Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible	The proposed project will divert and recycle construction and demolition waste in accordance with all applicable rules and regulations.
Minimize tree removal, and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance	The proposed project would provide for more trees on-site than currently exist through landscaping.
Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators	The proposed project will rely on existing grid power for electric energy to the extent feasible and practical.

Table 3.5-6, continued

Scoping Plan Local Action	Project Consistency
Operation	
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals	The proposed project will include 263 EV installed spaces, exceeding the City's requirements.
Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in nonresidential projects	The proposed project will include on-site bicycle parking and storage for residents, as well as a bike-share program.
Require on-site renewable energy generation	The proposed project will include a 434 kW solar photovoltaic system located on rooftop mounted arrays.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments	The proposed project will not include fireplaces or wood-burning stoves.
Require solar-ready roofs	The proposed project will include a 434 kW solar photovoltaic system located on rooftop mounted arrays.
Require low-water landscaping in new developments	The proposed project will include water-efficient landscaping techniques, including drip irrigation.
Expand urban forestry and green infrastructure in new land development	The proposed project would provide for more trees on-site than currently exist through landscaping.
Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage	The proposed project will include 263 EV installed spaces, exceeding the City's requirements.
Require each residential unit to be "solar ready," including installing the appropriate hardware and proper structural engineering	The proposed project will be designed to include a solar PV rooftop system that would be rated at 434 kW direct current.
Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans	The proposed project will include the use of energy-conserving appliances, such as ENERGY STAR labeled.
Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers	The proposed project will equip each residential unit with programmable thermostats to control the heating and AC system.
Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets	The proposed project would include low-flow or high-efficiency water fixtures (toilet, showerhead, clothes washer, etc.).

Table 3.5-6, continued

Scoping Plan Local Action	Project Consistency
Require the use of energy-efficient lighting for all street, parking, and area lighting	The proposed project will include the use of LED lighting or other efficient lighting for at least 75 percent of the total luminaires.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch	The proposed project would provide for more trees on-site than currently exist through landscaping.

Sources: CARB 2017b; Ldn Consulting, 2020b (Appendix F)

Notes: GHG = greenhouse gas; proposed project = The Fox Point Farms Project; CARB = California Air Resources Board; EV = electric vehicle.

San Diego Association of Governments' San Diego Forward: The Regional Plan

SANDAG developed *San Diego Forward: The Regional Plan* to provide a regional growth-management strategy that targets per-capita GHG emissions reductions from passenger vehicles and light-duty trucks in the San Diego region. The Regional Plan integrates land use and transportation strategies to meet GHG emissions reduction targets that are forecasted to achieve the state's 2035 and 2050 GHG reduction goals. The Regional Plan incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be consistent with the Regional Plan if it does not exceed the underlying growth assumptions in the Regional Plan.

Implementation of the proposed project would result in an increase in 249 residential units (250 less the one existing on-site residence), which is consistent with what was proposed in the HEU (between 246 and 296 units on the project site). The HEU includes the City's share of the required new residential units in the region, as provided by the Regional Housing Needs Assessment from SANDAG. The City projected a deficit of 1,062 very low/low income units and 238 moderate/above moderate income units (Encinitas 2019). As part of the HEU process, the City updated SANDAG with the growth projections approved by the City within the HEU. Therefore, since the proposed project has been designed in accordance with growth projections identified in the HEU, the proposed project would not conflict with SANDAG's regional growth forecast for the City.

Additionally, the proposed project includes energy efficiency features that support the policy objectives of the Sustainable Communities Strategy and Regional Transportation Plan required by SB 375. As shown in Table 3.5-7, the proposed project is consistent with all applicable Regional Plan policy objectives and strategies. Furthermore, the plan includes goals and objectives that promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns, which is consistent with the proposed project.

Table 3.5-7 Project Consistency with SANDAG's San Diego Forward: The Regional Plan

Category	Policy Objective or Strategy	Consistency Analysis
The Regional Plan – Policy Objectives		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	<i>Consistent.</i> The proposed project incorporates smart growth and sustainable design principles in its development plan. More specifically, the proposed project's design puts people in areas that are accessible to public transit. The design and locational attributes of the proposed project positively emphasize particular commuting choices and convenient access to the rest of the City and the region.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	<i>Consistent.</i> The proposed project includes 250 garages and 13 visitor EV charging stations to support EV adoption. Additionally, the proposed project would not impair SANDAG's ability to employ new technologies to make travel more reliable and convenient.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	<i>Consistent.</i> The proposed project would be located close to major urban and employment centers. As such, the project proposes to develop future housing opportunities in an infill location that capitalizes on existing infrastructure rather than in a non-developed area—such as an open space area, sensitive habitat, or area otherwise constrained due to topography, flooding, or other factors.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	<i>Consistent.</i> The project proposes new residential development in an infill location that would integrate residents into the existing community. The proposed project's location allows ease of access to regional shopping, entertainment, and employment.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	<i>Consistent.</i> The proposed project location would provide residents with the opportunity to access employment, recreational, and commercial uses via multiple modes of transportation. The proposed project would also encourage non-vehicular modes of transportation through its proximate location to nearby amenities.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	<i>Consistent.</i> While the proposed project does not require a transportation investment from SANDAG, it is noted that the proposed project would include numerous design attributes that reduce natural gas consumption, promote building electrification, enhance the efficiency of energy and water consumption, and facilitate the use of zero emission vehicles.

Table 3.5-7, continued

Category	Policy Objective or Strategy	Consistency Analysis
Environmental Stewardship	Support energy programs that promote sustainability.	<i>Consistent.</i> The proposed project would include numerous design attributes that reduce natural gas consumption, promote building electrification, enhance the efficiency of energy and water consumption, and facilitate the use of zero emission vehicles.
Sustainable Communities Strategy – Strategies		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	<i>Consistent.</i> The proposed project would be located on an infill site close to urban and employment centers. The project site is located along Leucadia Boulevard, which is served by NCTD Bus Route 304. The closest Route 304 stop is located south of the project site, on Leucadia Boulevard, adjacent to the site. Route 304 provides connections to the Coaster's Encinitas station, providing project residents with transit network opportunities to facilitate their travel.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	<i>Consistent.</i> The proposed project would be located on an infill site close to major urban and employment centers. As such, the project proposes to develop future housing opportunities in an infill location that capitalizes on existing infrastructure rather than in a non-developed area—such as an open space area, sensitive habitat, or an area otherwise constrained due to topography, flooding, or other factors.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.	<i>Consistent.</i> The proposed project would help reduce GHG emissions from vehicles in the region compared to a non-infill project. The closest Route 304 stop is located south of the project site, on Leucadia Boulevard, adjacent to the site. Route 304 provides connections to the Coaster's Encinitas station, providing project residents with transit network opportunities to facilitate their travel.
Strategy #4	Address the housing needs of all economic segments of the population.	<i>Consistent.</i> The proposed project includes both market-rate and affordable units to support all economic segments of the population.
Strategy #5	Implement the Regional Plan through incentives and collaboration.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to implement the Regional Transportation Plan through incentives and collaborations.

Source: SANDAG 2015; Ldn Consulting 2020b (Appendix F)

Notes: City = City of Encinitas; proposed project = Fox Point Farms Project; VMT = vehicle miles traveled; SANDAG = San Diego Association of Governments; EV = electric vehicle.

City of Encinitas Climate Action Plan

The City adopted an update to the 2011 CAP in January 2018. Since the adoption of the City's first CAP, new methods for calculating GHG emissions and projecting future emissions have been

developed. In addition, advances in technology and public policy offer greater options for innovative GHG reduction strategies. The City's updated CAP commits to implementing specific programs and projects aimed at reducing and mitigating the impacts of GHG-emitting activities by targeted dates. Housing construction associated with the proposed project would be subject to requirements of the CAP, as applicable.

Construction features required of new housing includes solar water heaters, rooftop solar panels, and low-flow fixtures as explained above. The proposed project would install 434 kW of solar which exceeds the requirements of CAP City Actions RE-2 and RE-3. The proposed project would also exceed the requirements of City Actions CET-4 and CET-5 by installing 263 EV charging stations on-site. Additionally, the proposed project would install a solar water heater at the recreation center pool and on-site restaurant, which would further reduce GHG emissions. With compliance with the CAP described above, the proposed project would be consistent with the CAP.

Conclusion

The proposed project is consistent with the CARB's *Climate Change Scoping Plan*; SANDAG's The Regional Plan, and the City's CAP. The proposed project is consistent with these plans based on the location of the project on an urban, infill site; design attributes that serve to reduce natural gas consumption, promote building electrification, and achieve other efficiencies in the consumption of energy, water and transportation fuels; and its provision of residential opportunities (including affordable units) in a jurisdiction with the need for more housing. Therefore, the proposed project would not conflict with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Impacts would be **less than significant**.

Mitigation Measures: None required.

Level of Significance: Less than significant.

WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES

Impact 3.5-3	The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Impacts would be less than significant.
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The impact analysis focuses on the three sources of energy that are relevant to the proposed project: (1) electricity (including energy required for water delivery, sanitary sewer, and solid

waste disposal), (2) natural gas, and (3) transportation fuel for vehicle trips associated with new development, as well as the fuel necessary for project construction.

Construction-Phase Energy Use

During construction, the proposed project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels to power construction vehicles and other energy-consuming equipment would be used during site demolition, clearing, grading, and construction. Fuel energy consumed during these activities would be temporary in nature and would not represent a significant demand on energy resources. Project construction equipment would be required to comply with the latest EPA and CARB engine emissions standards. These standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption.

Additionally, construction building materials would include recycled materials and products originating from nearby sources to reduce the costs of transportation. With increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid the wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive and that there is a significant cost-savings potential in green building practices and materials.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ reasonable energy conservation practices in the interest of minimizing the cost of doing business.

As such, project construction would not represent a substantial increase in demand for local or regional energy supplies. Construction fuel use would be temporary and would cease upon completion of project construction. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or state. Therefore, it is expected that construction fuel consumption

associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Operational Phase (Long-Term) Energy Use

Transportation Energy Demand

To comply with City Action CET-4 and CET-5 of the CAP, the proposed project is required to install EV charging stations at 5 percent of the total number of residential parking spaces and 8 percent of all commercial parking spaces. The project proposes to install EV charging stations in each garage of the 250 residential units, which far exceeds the requirement of City Action CET-4. In addition, the proposed project would include 13 EV charging stations in the commercial parking spaces, which meets the requirement of CET-5. Overall, the proposed project would install 263 Level II EV charging stations.

While the proposed project cannot guarantee residents would utilize the electric chargers, it is assumed that the availability of electric chargers on-site would incentive the adoption of electric vehicles and; thus, reduce the consumption of fossil fuels. In additional, the proposed project would implement a Transportation Demand Management (TDM) Plan to reduce vehicle miles traveled (refer to Section 3.12, Transportation). These TDM measures include improved pedestrian and bicycle facilities, transit subsidies for on-site employees, an e-bike sharing program for project residents, a business center in the community recreation center, and dedicated parking spaces for car-sharing programs. Furthermore, given the proposed project's small population compared to the size of the City and region, implementation of the proposed project would have a minimal contribution to fuel consumption and demand. As such, the proposed project would not have any unusual characteristics that would result in substantial or excessive long-term fuel consumption in the county. Therefore, the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during operation. Impacts would be **less than significant**.

Building Energy Demand

As described under Impact 3.5-1, the proposed project would include project components to promote sustainability through site design that would conserve energy, water, open space, and other natural resources, and would become specific COA by the City. Most notably, the proposed project would include 434 kW of solar and 263 Level II EV charging stations. The proposed project would meet or exceed 2019 Title 24 energy efficiency requirements.

The proposed project would also comply with CALGreen Tier II standards. Other energy-saving features incorporated into the proposed development include restrictions on natural gas hearths, implementing low-flow water fixtures, drought-tolerant landscaping, ENERGY STAR appliances,

high-efficiency HVAC systems, and stormwater reuse systems on-site to collect, filter, and reuse captured stormwater in landscaped areas. Therefore, the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during operation. Impacts would be **less than significant**.

Conclusion

The proposed project does not involve any unusual characteristics that would result in excessive long-term operational demand for electricity or natural gas. For the reasons described above, the proposed project would not place a substantial new demand on regional energy supply or require significant additional capacity. Therefore, the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Impacts would be **less than significant**.

Mitigation Measures: None required.

Level of Significance: Less than significant.

CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY

Impact 3.5-4	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant.
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Refer to Impact 3.5-1 and 3.5-2. The proposed project would follow applicable energy standards and regulations during the construction and operation phases. Specifically, the proposed project would be consistent with all actions in the CAP. As stated above, the proposed project would include 434 kW of solar and 263 Level II EV charging stations, which complies with CET-4 and CET-5 of the CAP. Furthermore, the proposed project includes various project components to reduce its energy consumption, which include installing smart meters and programmable thermostats, low-flow water fixtures, and efficient lighting in all buildings (refer to Impact 3.5-1). The proposed project would be built and operated in accordance with all existing, applicable regulations at the time of construction. For the reasons stated, the proposed project would not obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be **less than significant**.

Mitigation Measures: None required.

Level of Significance: Less than significant.

CUMULATIVE IMPACTS

Impact 3.5-5	The project would not result in cumulative impacts related to energy conservation and climate change. Impacts would be less than cumulatively considerable.
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Geographic Scope

Climate change is an inherently cumulative category of impact. No one project will cause climate change; rather, it is the agglomeration of all global emissions that causes harm. To help address its contribution to the cumulative issue, the state of California has elected to reduce GHG emissions at the state level for activities under its control and has promulgated policy for local agencies to do the same. As such, the City predominantly uses the CAP as the mechanism to reduce GHG emissions and energy consumption in the City on a project-by-project basis.

Cumulative projects that would have the potential to be considered in a cumulative context with the proposed project's incremental contribution, and that are included in the analysis of cumulative impacts relative to energy resources, are identified in [Table 3.0-1](#) and [Figure 3.0-1](#) in [Section 3.0](#) of this EIR. Additionally, to be conservative, the cumulative analysis includes all 2019 HEU sites to the extent they may contribute to certain issue-specific cumulative effects (see [Table 3.0-2](#)).

Potential Cumulative Impacts

The proposed project is consistent with the General Plan and accounted for in the HEU, which will form the basis of future updates to the CAP, and the project and cumulative project's emissions would be captured in such future CAP updates. The CAP is currently being updated to account for the HEU, including the proposed project and other cumulative projects listed in [Table 3.0-1, Cumulative Projects](#).

The proposed project is required to be consistent with the City's CAP through implementing the appropriate CAP measures, which are described above. Similarly, other cumulative projects analyzed in the HEU would also be consistent with the General Plan, and future projects would be subject to provisions of the CAP and any associated implementing ordinances in effect at the time of application submittal for those projects. Furthermore, future development would be subject to compliance with applicable federal, state, and local energy and building regulations.

In addition, the proposed project would generate fewer emissions than the City-specific localized efficiency metric that would be required to achieve 2030 emissions thresholds and the proposed project's long-term (2050) emissions of 2.08 MT CO₂e/yr would be within CARBs emissions projections for 2050 per the 2017 Scoping Plan Second Update. Therefore, the proposed project

would not generate substantial GHG emissions and would not substantially contribute to cumulatively considerable short- or long-term GHG impacts.

As to energy consumption, this cumulative impact analysis focuses on the three sources of energy that are relevant to the proposed project: (1) electricity (including energy required for water delivery, sanitary sewer, and solid waste disposal), (2) natural gas, and (3) transportation fuel for vehicle trips associated with new development, as well as the fuel necessary for project construction. Construction of the cumulative projects listed in [Table 3.0-1](#) and [Table 3.0-2](#) would not represent a substantial increase in demand for local or regional energy supplies because construction fuel use would be temporary and would cease upon completion of project construction. None of the cumulative projects would involve any unusual characteristics that would result in excessive long-term operational demand for electricity or natural gas.

As described under Impact 3.5-1, the proposed project includes project components to promote sustainability through site design that would conserve energy, water, open space, and other natural resources, and would become specific conditions of approval by the City. Other cumulative projects would also include project components to comply with the CAP and/or other local, state, and federal regulations. As required by CET-4 and CET-5 of the CAP, projects are required to install rooftop solar panels and Level II EV charging stations, which would reduce each cumulative project's energy consumption. As stated in Impact 3.5-3, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the proposed project's contribution to a cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures: None required.

Level of Significance: Less than cumulatively considerable.